Amendments to the Specification:

Please replace the paragraphs at page 3, line 18, to page 4, line 21, with the following amended paragraphs:

The present invention has: a step of forming a first semiconductor film having a crystalline structure by using a metallic element; a step of forming a film that becomes an etching stopper (barrier layer); a step of forming a second semiconductor film; a step of forming a third semiconductor film containing ~~an inert~~ a noble (rare) gas element (gettering sites); a step of gettering the metallic element to the gettering sites; and a step of removing the second semiconductor film and the third semiconductor film.

Further, in the step of forming the third semiconductor film containing the [[inert]] noble (rare) gas element (gettering sites), the [[inert]] noble (rare) gas element may also be added to the semiconductor film after forming the semiconductor film having an amorphous structure or a crystalline structure. Ion doping or ion injection may be used as a method for adding the [[inert]] noble (rare) gas elements. Note that film formation conditions are regulated so that film peeling does not develop.

One element, or a plurality of elements, selected from the group consisting of H, H_2, O, O_2 and P may also be added in addition to the [[inert]] noble (rare) gas element. A synergistic gettering effect can be obtained by thus adding a plurality of elements. Among the group, O and O_2 are particularly effective, and gettering efficiency is increased if oxygen concentration added during or after film formation is equal to or greater than $5\times10^{18}/cm^3$ within the second semiconductor film and the third semiconductor film as measured by SIMS analysis, preferably in a concentration range from $1\times10^{19}/cm^3$ to $1\times10^{22}/cm^3$. Note that inert gas elements have almost no diffusion. If another element added in addition to the [[inert]] noble (rare) gas element diffuses easily, then it is preferable to regulate the film thickness of the second semiconductor film such that the other added element does not diffuse to the first semiconductor film

due to later heat treatment processes. Furthermore, in addition to the second semiconductor film, the barrier layer also functions to prevent diffusion of the other element.

The step of forming the third semiconductor film containing the [[inert]] noble (rare) gas element (gettering sites) may also be performed by employing plasma CVD or reduced pressure thermal CVD using a raw material gas containing the [[inert]] noble (rare) gas element. However, the film formation conditions are regulated so that film peeling does not develop.

Please replace the paragraph beginning at page 5, line 7, with the following amended paragraph:

Further, a graph of Table 1 is shown in FIG. 16, and a comparative example of an amorphous silicon film with pulse oscillation is also shown. A compressive stress (approximately 9.7×10^9 dynes/cm^2) is shown for the amorphous silicon film formed by using RF pulse oscillation, and therefore there is a concern that film peeling will develop. Consequently, it is preferable to form films by using continuous oscillation RF at the conditions showing tensile stresses (1.12 to 1.68×10^9 dynes/cm^2) of Table 1. The second semiconductor film that does not contain the [[inert]] noble (rare) gas element may be formed by conditions of the sample A or B, and it is preferable to form the third semiconductor film that contains the [[inert]] noble (rare) gas element by using one set of conditions from among those of samples C to L.

Please replace the paragraph beginning at page 6, line 8, with the following amended paragraph:

The third semiconductor film containing the [[inert]] noble (rare) gas element may also be formed by sputtering. The [[inert]] noble (rare) gas element may additionally be

added at the film formation stage after obtaining the third semiconductor film containing the [[inert]] noble (rare) gas to increase the gettering efficiency.

Please replace the paragraph beginning at page 6, line 21, with the following amended paragraph:

a fifth step of forming a third semiconductor film, containing ~~an inert~~ a noble (rare) gas element at a concentration of 1×10^{19} to $1\times10^{22}/cm^3$, on the second semiconductor film;

Please replace the paragraphs at page 7, lines 4-11, with the following amended paragraphs:

In the above structure of the present invention, the fifth step may be made into: a step of forming a semiconductor film and a step of adding ~~an inert~~ a noble (rare) gas element to the semiconductor film; or a step of forming a third semiconductor film containing ~~an inert~~ a noble (rare) gas element by using plasma CVD or reduced pressure thermal CVD; or into a step of forming a third semiconductor film containing ~~an inert~~ a noble (rare) gas by using sputtering.

Further, if the [[inert]] noble (rare) gas element is added in the above structure, it is preferable to also add one element, or a plurality of elements, chosen from the group consisting of O, O_2, P, H, and H_2 in addition to the [[inert]] noble (rare) gas.

Please replace the paragraph beginning at page 7, line 16, with the following amended paragraph:

The present invention is not limited to the above structure, and gettering sites may also be formed by adding ~~an inert~~ a noble (rare) gas element only on the upper layer of the second semiconductor film, without forming the third semiconductor film.

Please replace the paragraph beginning at page 8, line 4, with the following amended paragraph:

a fifth step of adding ~~an inert~~ a noble (rare) gas element at a concentration of 1×10^{19} to $1\times10^{22}/cm^3$ to an upper layer of the second semiconductor film;

Please replace the paragraph beginning at page 8, line 10, with the following amended paragraph:

It is preferable to also add one element, or a plurality of elements, chosen from the group consisting of O, O_2, P, H, and H_2 in addition to the [[inert]] noble (rare) gas element in the fifth step of the above structure.

Please replace the paragraph beginning at page 9, line 13, with the following amended paragraph:

Further, it is characterized in that the [[inert]] noble (rare) gas element in each of the above structures is one element, or a plurality of elements, chosen from the group consisting of He, Ne, Ar, Kr, and Xe.

Please replace the paragraph beginning at page 10, line 20, with the following amended paragraph:

One aspect of the present invention has a process of forming a barrier layer and a semiconductor film on a crystalline semiconductor film, a process of forming a semiconductor film containing ~~an inert~~ a noble (rare) gas element (gettering sites) on the crystalline semiconductor film, and a process of performing a heat treatment process. A metal contained in the crystalline semiconductor film moves due to the heat treatment process, and passes through the barrier layer and the semiconductor film (the semiconductor film that does not contain an ion of the [[inert]] noble (rare) gas element), and is captured in the gettering sites (the semiconductor film containing the ion of the [[inert]] noble (rare) gas element). The metallic element is thus removed from, or its amount is reduced in, the crystalline semiconductor film. Note that strong light may also be irradiated as a substitute for the heat treatment process, and that the irradiation of strong light may be performed at the same time as the heat treatment process.

Please replace the paragraphs at page 13, line 9, to page 14, line 8, with the following amended paragraphs:

A third semiconductor film 107 containing ~~an inert~~ a noble (rare) gas element (gettering sites) is formed on the second semiconductor film 106. The third semiconductor film 107 may be formed by plasma CVD, reduced pressure thermal CVD, or by sputtering, and may have an amorphous structure or a crystalline structure. The third semiconductor film may be a semiconductor film containing ~~an inert~~ a noble (rare) gas element at a film formation stage, or ~~an inert~~ a noble (rare) gas element may be added after formation of a semiconductor film not containing ~~an inert~~ a noble (rare) gas element. An example is shown in FIGS. 1A to 1G in which the third semiconductor film 107 is formed containing ~~an inert~~ a noble (rare) gas element at the film formation stage, and then the [[inert]] noble (rare) gas element is additionally added selectively, forming a third semiconductor film 108. Furthermore, the second semiconductor film and the third semiconductor film may be formed in succession without exposure to the

atmosphere. The sum of the film thickness of the second semiconductor film and the film thickness of the third semiconductor film may be from 30 to 200 nm, for example 50 nm.

A gap is opened between the first semiconductor film 104 and the third semiconductor film 108 (gettering sites) by the second semiconductor film 106 with the present invention. There is a tendency for the metallic elements to easily gather near the boundaries of the gettering sites during gettering, and therefore it is preferable to keep the boundaries of the gettering sites far away from the first semiconductor film 104 to increase gettering efficiency, by using the second semiconductor film 106 as in the present invention. In addition, the second semiconductor film 106 also is effective in blocking impurity elements contained in the gettering sites from diffusing during the gettering process and reaching an interface with the first semiconductor film. The second semiconductor film 106 also has a protective effect so that damage is not imparted to the first semiconductor film if inert gas elements are later added to the third semiconductor film.

Please replace the paragraph beginning at page 15, line 21, with the following amended paragraph:

The TFT thus obtained has, at least, nickel elements removed from a channel forming region 114, and also does not contain inert gas elements.

Please replace the paragraph beginning at page 16, line 17, with the following amended paragraph:

Gettering sites may also be formed by adding ~~an inert~~ a noble (rare) gas element to only the upper layer of the second semiconductor film, without forming the third

semiconductor film, shown in Embodiment mode 1. An example of this is explained here using FIGS. 2A to 2G.

Please replace the paragraphs at page 17, lines 2-11, with the following amended paragraphs:

A second semiconductor film 206 is formed next on the barrier layer 205. (See FIG. 2C.) The second semiconductor film 206 contains ~~an inert~~ a noble (rare) gas element. A semiconductor film having an amorphous structure may be formed, and a semiconductor film having a crystalline structure may also be formed. It is preferable to include oxygen in the second semiconductor film 206 (at a concentration measured by SIMS analysis equal to or greater an than $5\times10^{18}/cm^3$, preferably equal to or greater than 1×10^{19} $/cm^3$) to increase gettering efficiency.

~~An inert~~ A noble (rare) gas element is then added to an upper layer of the second semiconductor film 206. A region to which the [[inert]] noble (rare) gas element is added is denoted by reference numeral 207, as shown in FIG. 2D. The region 207 contains gettering sites.

Please replace the paragraph beginning at page 18, line 7, with the following amended paragraph:

The TFT thus obtained also has, at least, nickel elements removed from a channel forming region 213, and also does not contain inert gas elements in the channel forming region 213.

Please replace the paragraph beginning at page 20, line 1, with the following amended paragraph:

After forming an amorphous silicon film having a thickness of 55 nm using plasma CVD, a solution containing nickel is maintained on the amorphous semiconductor film in Embodiment 1. Thermal crystallization (at 550°C for 4 hours) is performed after performing dehydrogenation (at 500°C for 1 hour) of the amorphous silicon film. Laser annealing is then performed in order to further improve crystallization, and a crystalline silicon film is formed. Then, in accordance with Embodiment mode 1, an extremely thin oxide film is formed on the surface by using a solution containing ozone. A second semiconductor film containing oxygen (at a concentration measured by SIMS analysis equal to or greater than $5\times10^{18}/cm^3$, preferably equal to or greater than $1\times10^{19}/cm^3$), and a third semiconductor film containing ~~an inert~~ <u>a noble (rare)</u> gas element are formed on a surface of the oxide film. Gettering in then performed in accordance with Embodiment mode 1 by performing a heat treatment process, after which the second semiconductor film and the third semiconductor film, using the oxide film as etching stoppers, are removed. The crystalline silicon film is patterned, and the oxide film is removed. The semiconductor layers 302 to 306 made from the crystalline silicon film, in which the nickel concentration is equal to or less than $1\times10^{18}/cm^3$, preferably equal to or less than $1\times10^{17}/cm^3$, are thus formed. A state after patterning of the semiconductor layers 302 to 306 is completed corresponds to FIG. 1F in Embodiment mode 1. Note that doping (also referred to as channel doping) of a very small amount of an impurity element (boron or phosphorous) in order to control the TFT threshold value may also be performed appropriately.

Please replace the paragraph beginning at page 26, line 16, with the following amended paragraph:

~~An inert~~ <u>A noble (rare)</u> gas element may also be added before or after the second doping process, and additional gettering can be performed later by a heat treatment process in this case. Also, in this case, it is preferable to use a mask formed

so that the [[inert]] noble (rare) gas element is added to the edge portions of all of the semiconductor layers.

Please replace the paragraphs at page 47, line 21, to page 48, line 10, with the following amended paragraphs:

Furthermore, a high concentration of ~~an inert~~ a noble (rare) gas element can be added to a semiconductor film at a reduced processing time on the order of 1 or 2 minutes, and therefore the throughput can be increased remarkably compared to gettering using phosphorous.

Further, a gettering ability of the present invention using ~~an inert~~ a noble (rare) gas element is high compared to gettering using phosphorous, and in addition, ~~an inert~~ a noble (rare) gas element can be added at a high concentration, for example from 1×10^{20} to $5\times10^{21}/cm^3$, and therefore the amount of a metallic element added for use in crystallization can be increased. In other words, it becomes possible to perform crystallization processing at a shorter processing time by increasing the addition amount of the metallic element used in the crystallization. Furthermore, even if the length of crystallization processing time is not changed, crystallization can be performed at a lower temperature by increasing the addition amount of the metallic element used in the crystallization. In addition, spontaneous nucleation can be reduced, and a semiconductor film having a good crystallinity can be formed by increasing the addition amount of the metallic element used in the crystallization.